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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/460,960	12/14/1999	MATTHEW ZAVRACKY	0717.1128001	3174

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EXAMINER

NGUYEN, KIMNHUNG T

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 04/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/460,960

Applicant(s)

ZAVRACKY ET AL.

Examiner

Kimnhung Nguyen

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 10/18/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-18,20-31 and 86-89 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-18,20-31 and 86-89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

This Application has been examined. The claims 1-4, 6-18, 20-31 and 86-89 are pending. The examination results are as following.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4, 14, 16-18, and 86-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter (US patent 5,359,345) in view of Walsh et al. (US patent 5,886,681).

Regarding claims 1-2, 14, and 18, 86-88, Hunter discloses in fig. 1, ~~that a~~ method of displaying an image on a liquid crystal display having a plurality of pixel electrodes 32, 33, 34); writing an image to the display such that the liquid crystal moves to an image position; and a selecting a light source (30, including LED 32, 33, 34 based on the brightness level (see col. 7, lines 20-43); and automatically adjusting the brightness of the light source (see col. 7, lines 37-43); flashing a light source to illuminate the display and repeating the writing, flashing, and setting steps to produce a sequence of a images. However, Hunter does not disclose ~~a~~ detecting an ambient light level with a sensor; automatically selecting a light source based on the detected ambient light level, the brightness being dependent on the detected ambient light level. Walsh et al. discloses in figs. 6 and 10, a dual backlight apparatus having detecting an ambient light level with a

sensor (see photo sensors devices 123 a and 123b, see col. 3, lines 63-67, col. 4, lines 1-5, col. 6, lines 15-28) ; automatically selecting a light source based on the detected ambient light level, the brightness being dependent on the detected ambient light level (see col. 6, lines 15-28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement a dual backlight apparatus having detecting an ambient light level with a sensor automatically selecting a light source based on the detected ambient light level, the brightness being dependent on the detected ambient light level as taught by Walsh et al. into the system of Hunter because this would provide response to automatically provide seamless integration of both classes of night-lighting with daylight illumination along a continuum for the sake of flexibility.

Regarding claims 4 and 17, Walsh et al. discloses that wherein the liquid crystal display is transmissive and the light source is a backlight (see col. 2, lines 5-6).

Regarding claim 16, Hunter discloses that wherein the light source has at least one light emitting diode (LED 32).

3. Claims 3, 6-13, 15, 20-31, 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter (US 5,359,345) and Walsh et al. (US 5,886,681) as applied to claims 1, 14 above, and further in view of Jacobsen et al. (US 6,232,973).

Hunter and Walsh et al. discloses every feature of the claimed invention as discussed above, excluding that wherein the liquid crystal is an active matrix display having at least 75,000 pixel electrodes and having an active area of less than 160mm square; the step of switching the voltage of the counter electrode after each flashing of the light source and

prior to the next writing of the image and the voltage to each pixel electrode is done sequentially starting at one corner and progressing until ending the opposite corner; the step of waiting a setting time to allow the liquid crystal to twist between the writing of the last pixel and the flashing of the light source; and the display is accomplished by writing a plurality of pixel electrodes simultaneously, and the method further comprising a process to discharge the storage capacitor of the pixel.

Regarding claims 3 and 15, Jacobsen et al. discloses that wherein the liquid crystal is an active matrix display having at least 75,000 pixel electrodes and having an active area of less than 160mm square (see claim 1).

Regarding claims 6-8, Jacobsen et al. discloses that the step of switching the voltage of the counter electrode after each flashing of the light source and prior to the next writing of the image (see column 11, lines 36-42), and the voltage to each pixel electrode is done sequentially starting at one corner and progressing until ending the opposite corner (see column 11, lines 51-54).

Regarding claims 9-13, and 20, Jacobsen et al. discloses that ^{the} a method further comprising ^{es} the step of waiting a setting time to allow the liquid crystal to twist between the writing of the last pixel and the flashing of the light source (see figure 21, column 12, lines 42-53) and the display is accomplished by writing a plurality of pixel electrodes simultaneously (see claim 1), and the method further comprising ^{es} a process to discharge the storage capacitor of the pixel (see column 11, lines 18-30).

Regarding claims 21, 89, Jacobsen et al. discloses that an active matrix liquid crystal display comprising an active matrix circuit having an array of transistor circuit formed in a first plane, each transistor circuit being connected to a pixel electrode in an array of pixel electrodes; an integrated circuit display controller connected to the active matrix circuit, the controller including a read memory, a write memory and a timing control circuit; a counterelectrode panel extending in a second plane that is parallel to the first plane, such that the counterelectrode panel receives an applied voltage; and a liquid crystal layer interposed in a cavity between the two planes (see figure 2B, see claims 1 and 8, and see column 8, lines 25-45). However, Hunter, Walsh et al. and Jacobsen et al. do not disclose an array of pixel electrodes having an area of 200mm squares or less.

^{But}
~~From the claim,~~ it would have been obvious for Hunter, Walsh et al. and Jacobsen et al.'s system to have the an array of pixel electrodes having an area of 200mm squares or less as claimed since such a modification would have involved a mere change in range of a system. Note of Jacobsen et al. disclose that an array of pixel electrodes having an area of less than 160mm (see claim 18). A change in range is generally recognized as being within the level of ordinary skill in the art.

See In re Rose, 105 USPQ 237 (CCPA 1995) and

See In re Reven, 156 USPQ 697 (CCPA 1968).

Regarding claims 22-31, Jacobsen et al. discloses the active matrix crystal display comprising circuit for setting voltage of the pixel electrodes to the voltage of the counterelectrode to each subframe (see column 12, lines 29-41); further comprising circuit to heat the liquid crystal display (see column 11, lines 66-67); a sensor interposed

between the substrates to monitor a property of the liquid crystal (see figure 2F, column 11, lines 43-45, and see claim 3); and wherein the writing of the image to the display by setting the voltage to each pixel electrode is done sequentially starting at one corner and progressing until the opposite corner (see column 11, lines 51-45); and wherein the property that is measured is the temperature of the liquid crystal (see claim 19); Jacobsen et al. also disclose that the property that is measures is the capacitance of the liquid crystal (see column 11, lines 18-30). However, Hunter, Walsh et al. and Jacobsen et al. do not disclose that wherein the array of transistor circuits are formed on an oxide layer and layer is thinned at the pixel electrodes. From the claim, it would have been obvious for Hunter, Walsh et al. and Jacobsen et al.'s system to have the array of transistor circuits are formed on an oxide layer and layer is thinned at the pixel electrodes as claimed since such a modification would have involved a mere change a material of a system. Note of Jacobsen et al. disclose that the array of transistor circuits are formed over a silicon-on an insulator (SIO) structure oxide layer and layer is thinned at the pixel. A change in material is generally recognized as being within the level of ordinary skill in the art.

See In re Rose, 105 USPQ 237 (CCPA 1995) and

See In re Reven , 156 USPQ 697 (CCPA 1968).

Response to arguments

4. Applicant's arguments with respect to claims 1-4, 6-18, 20-31 and 86-89 have been considered but are moot in view of the new ground(s) of rejection.

ALEXANDER EISEN
PRIMARY EXAMINER